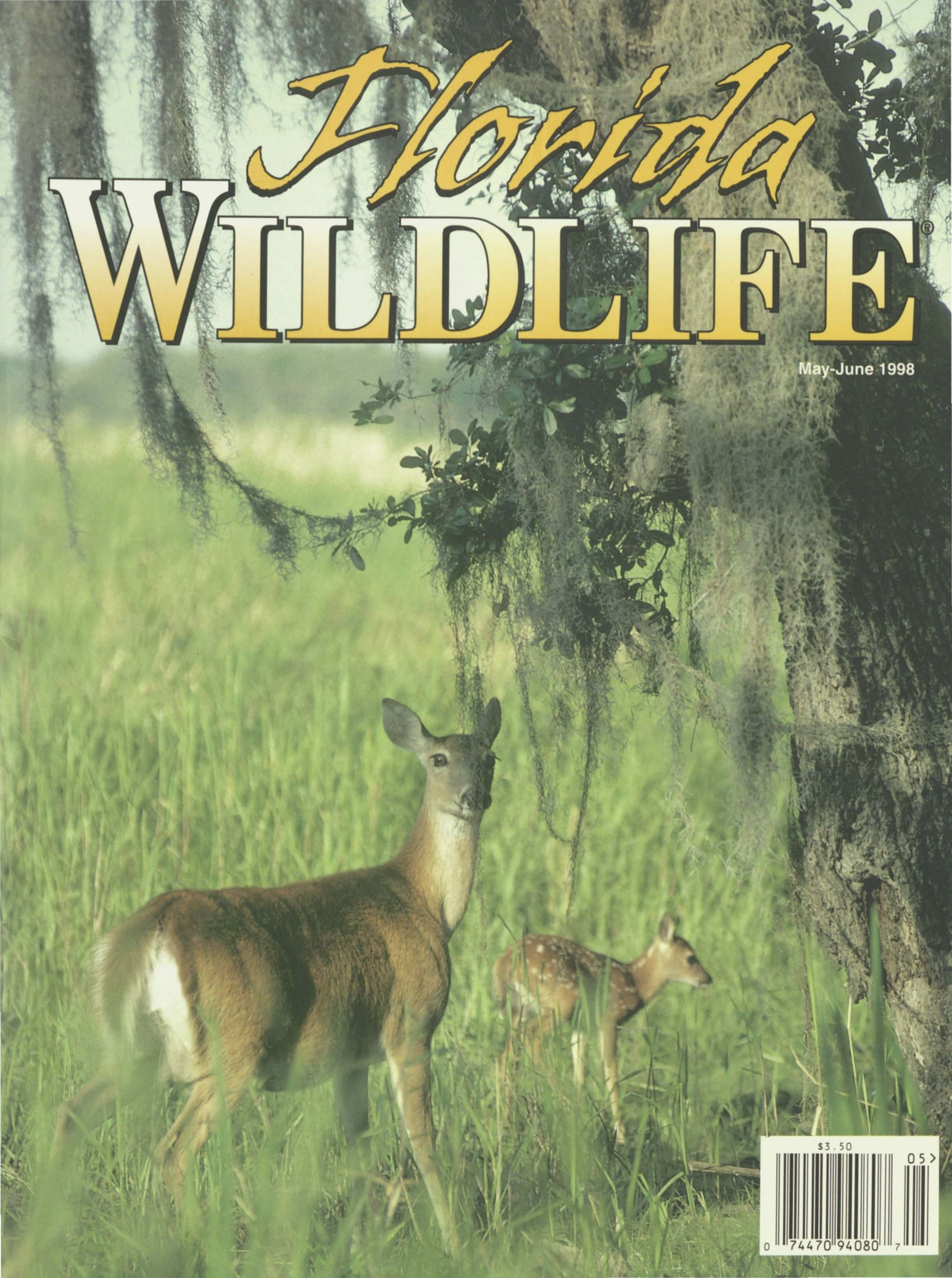


The background of the cover is a photograph of a swampy forest. In the foreground, a large doe stands in tall green grass, looking towards the camera. Behind her, a smaller spotted fawn is visible. The background is filled with large trees and thick Spanish moss hanging from the branches.

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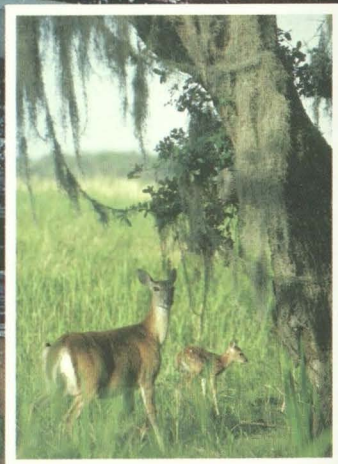
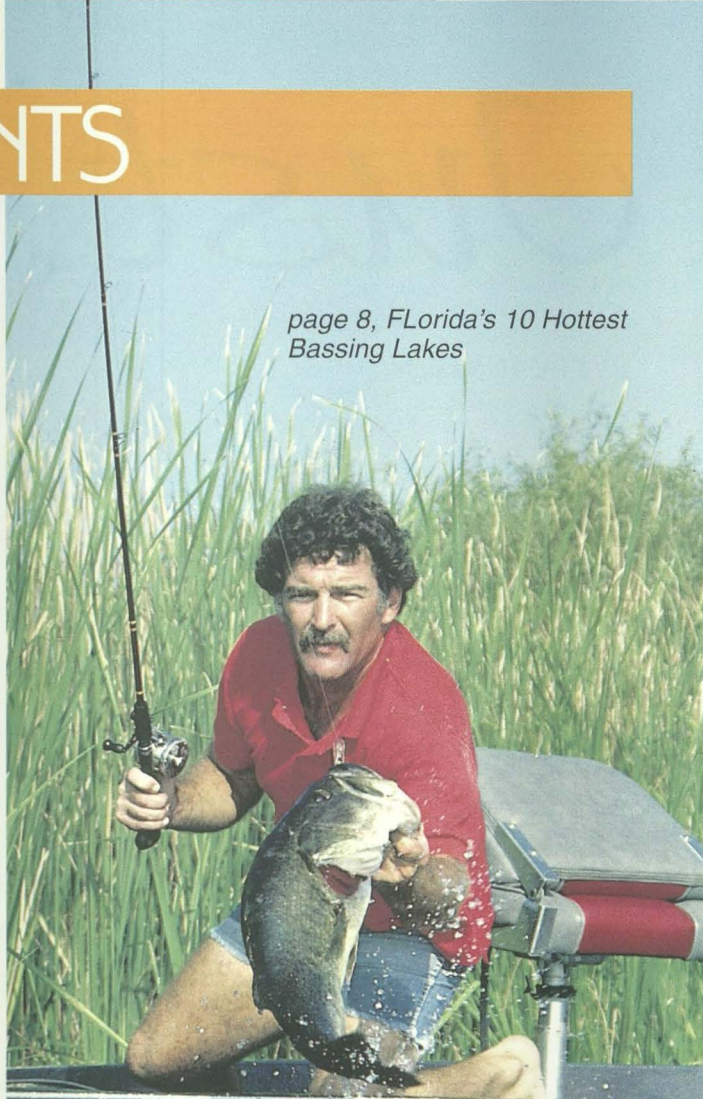
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COVERS

A white-tailed doe and fawn photographed by Steven Nourse grace the front cover. James Valentine captured the stunning back cover photo at Big Shoals Wildlife Management Area.

Just A Mere

By Elsie H. Straight

I'm such a little frog in a great big pond called progress. All I can do now is offer my sympathy to all the wildlife that lived on a very small pond bordering my property – although I realize they aren't here any longer, and of course they would not understand. I do wish, though, I could tell the wild critters that I did try to help them, and being called a "ditsy old woman" didn't matter, and it still doesn't, except that my efforts were to no avail. They had to leave.

It is such a little pond, but we loved it, my creature friends and I. The wood ducks who came and raised their young every year, as well as their cousins the marsh ducks, and more distant relatives, the anhingas and the gallinules – all of them found on the two tiny, wooded islands with thick bushes and trees a great place to roost and be safe from predators, where there were plenty of good things to eat.

Other visitors who came daily to the little pond found shelter when it was stormy and there was food available for all. Some had to dive for it; others found it growing around the edges, or in the small wooded place at the south end, while many had to catch their dinner, accessible by whatever method they chose and whichever was characteristic of each species.

A great many came often. Gulls and skimmers were always present, as were the herons, gray and white, large and small. Plenty of big pelicans were here daily, and egrets, bitterns and waders of all sorts. Wood storks, spoonbills, ibis and rails came occasionally, and more rarely an otter would spend time at our little spring-fed pond. Turtles emerged from the

But nothing is forever, to use the old cliché. New neighbors arrived on the other side of the pond and immediately determined that such an untidy, overgrown, bushy pond with two developable small islands was direly in need of improvement.

water to lay eggs in the sandy soil, and birds nested in the trees.

Oh, it was a busy place, this little pond! I was always assured of unceasing entertainment. Music too! The frog chorus was my nightly serenade, the frogs doing their best to drown out the calls of the owls, chuck-will's-widows and other creatures of the night.

But nothing is forever. New neighbors arrived on the other side of the pond and immediately determined that such an untidy, overgrown, bushy pond with two developable small islands direly needed improvement. They removed bushes. They cut down trees. They erected a pavilion on what now has become a lawn, on one island, while picnic tables and cooking

grills appeared on the other – with red bridges connecting. Forty fancy domestic ducks arrived, and later ten Peking ducks. There was great rejoicing that "we got rid of the frogs and all that noise."

Now my music is the squawking of ducks.

A pair of marsh ducks came the other day and were immediately driven away by the Pekings. A great blue heron I have known for many years and whom I call "Long John" sits forlornly on the picnic table, reduced to eating bread thrown to the ducks by children. He now comes to my steps to beg for food. We both know this is against the rules, but aging sometimes makes it necessary to change one's lifestyle.

People remark how nice the pond looks – just like a city park now, and what a grand job my new neighbors did in "fixing it up." Where is their vision?

As for me, my fussing, my protests, my calling environmentalists and government agencies has earned me the reputation of being an old busy-body, a nutty interferer. My neighbors no longer speak to me. They question my sanity. They might be right!

How can I explain to my pond friends that we were impeding progress? It seems there is no more room for little frogs in the big pond, or even the little ponds any more. This is called betterment.

I wish my pond friends good luck. Wherever they are now. 🐸

Elsie H. Straight, who is 83, is a retired librarian from the Ringling School of Art. She was instrumental in preventing a wildlife habitat near her home from being developed into a mall.

Pond



peggy perkerson





BIG SHOALS

Wildlife Management Area

By Lt. Dewey A. Weaver

Walking the trail near the Suwannee River, I hear first a sound similar to leaves rustling, but no wind stirs the trees. Further into the one-mile hike the sound increases to a rumble and begins to stir something deep within and I am drawn to the sound as surely as the dark, tannic, river water is drawn to the Gulf of Mexico. With each minute the sound increases and when I round the next bend in the trail, the sound is the powerful, turbulent roar of millions of gallons of water passing over limestone outcroppings to create the best white-water rapids in Florida. I am finally witnessing the power, beauty and strangely disturbing majesty of Big Shoals.

Big Shoals Wildlife Management Area (WMA) borders this section of the Suwannee River in Hamilton County. The 3,495-acre area, managed by the Florida Division of Forestry and the Game and Fresh Water Fish Commission (GFC), is open to limited hunting, fishing, hiking, horseback riding and biking, plus it has a canoe/kayak launch for access to the river.

Before being purchased by the Nature Conservancy in 1986, the tract had a long history of farming, turpentine and logging. Local residents recall hearing old-timers speak of cotton growing in the area.

During World War II, the site was used for turpentine, cattle grazing and crosstie cutting. Around 1956 the land was purchased by Brown Wood Preserving Company which held the property as a timber reserve for those occasions when light poles could not be purchased on the open market.

"This is a wonderful example of a mature pine forest and riverside hardwood hammock," said Art Stockle, the area wildlife biologist for the GFC. "Big Shoals WMA is a great place for a scenic view from the high bluffs that border the river, especially when wild azaleas bloom in the spring."▷

It is ironic that Stephen Foster never gazed upon the brown-stained river made famous by his song, "Old Folks at Home." The beautiful surrounding woodlands today remain as some of the least developed of all waterfront property in Florida.

Off-road bicycling is one of the more popular recreations, with the Suwannee Bicycle Association (SBA) annually sponsoring a 50-mile off-road challenge ride.

Liz Burden



The diverse habitat attracts many species. It is not uncommon for visitors to see whitetail deer, river otters, bobcats and a great variety of songbirds.

"Birdwatchers can see 30-40 species on any day and during the spring and fall migration, up to 60-70 species can be observed," Stockle said.

Off-road bicycling is one of the more popular recreations, with the Suwannee Bicycle Association (SBA) annually sponsoring a 50-mile off-road challenge ride. It is not a race, but an endurance Iditaride, off-road, through the woodlands along the Suwannee River.

"This is one of the favorite places to ride, with 14 miles of dirt trail and approximately six miles of challenging single-track trail," said John Ault, a member of the SBA. "A single track means that there is not enough room for two bicycles to pass on the trail."

Big Shoals lies downstream from the canoe/kayak launch area and canoeists are advised to portage their canoes around the rapids as they are dangerous. The rapids, a favorite of kayakers, consists of a double drop, with the first ledge a 4-foot drop into a diagonal curler and the second a 5-6 foot drop with exposed rock at the bottom. The rock is limestone and is as sharp as coral.

Fishing in the river is excellent around pockets of slow-moving water formed by fallen trees or limestone outcrops. These areas offer places for fish to hide and rest, waiting for food to wash into the eddies.

Optimum fishing conditions for redbreast sunfish, shellcracker, largemouth bass and other sunfish happen when the river is low. When water levels rise, catfish begin to feed and may be caught throughout the high-water periods. Best baits for catfish and sunfish are earthworms and Catawba worms fished with heavy weight to keep them on or near the bottom. Spinner baits and small diving lures colored like crawfish are best for largemouth bass.

Hikers have access to over 20 miles of trails and woods roads that twist and turn through the ancient hardwood forests of towering white oak and magnolia trees.

CARL Program Saving Land For The Future

The Florida Trail, maintained by the Florida Trail Association, traverses the area. Horseback riding is allowed on Big Shoals WMA but horses must be kept on those roads open to vehicular traffic.

"Big Shoals doesn't seem to have as high a deer population as other places I hunt, but it certainly is one of the most beautiful places," said Rudy Howell of Lake City. "I love the vast hardwood hammocks that run along the river. This is the type of habitat that you don't find anymore in Florida."

Hunting is restricted to limited duration hunts and requires a quota hunt permit. "Because the area is small and overcrowding can be a problem, there are no exemptions for senior citizens, underage or disability," said Stockle.

Hunts include three six-day archery hunts, one three-day muzzleloading gun hunt, and one three-day modern gun hunt. In addition, two small game hunts and two spring turkey hunts are allowed. The small game hunts have no quota restrictions and offer excellent squirrel hunting. The hardwood forest near the river is good mast producing habitat and the abundance of squirrels makes Big Shoals WMA an ideal place to introduce young hunters to the sport.

The quiet, peace and beauty of the area is typical of the old South. The live oak trees draped with Spanish moss and the gentleness of passing water make Big Shoals WMA a living postcard. 🍷

Directions to Big Shoals WMA:
White Springs is located approximately 10 miles north of Lake City on U.S. Highway 41. When entering White Springs from the south, turn right on county Road 135. The entrance is approximately two miles on the right.

Lt. Dewey A. Weaver is the public information director for the GFC's Northeast Region.

This river otter lives in the Big Shoals along the Suwannee River, one of the last pristine rivers in the Southern U.S.

The Conservation and Recreation Lands program (CARL) was created by the Florida Legislature in 1979. In the past two decades it has purchased and set aside more than 883,000 acres of wilderness.

CARL aims to conserve and protect natural areas, wetlands, endangered species, unusual geologic features, archaeological and historic sites. The land purchased is maintained as parks, recreation areas, wildlife preserves, forests and greenways.

A land acquisition advisory council selects and ranks proposed properties to be included in the program on a yearly basis. That list is then sent to the governor and cabinet for approval.

To recommend land to CARL contact the Department of Environmental Protection and request a CARL application form.

Department of Environmental Protection
Office of Environmental Services
3900 Commonwealth Blvd.
Mail Station # 40
Tallahassee, Florida 32399-3000

Applications can be requested by calling the Office of Environmental Services at (850) 487-1750.



Ted Rose

Florida's 10 Hottest Bassing Lakes

By Mark A. Trainor

Last year was a banner year for catching trophy bass. Florida once again is producing big bass like those that lured anglers from all over the world during the 1950s and '60s.

According to Jerry Shireman, director of the Game and Fresh Water Fish Commission (GFC) Division of Fisheries, anglers have reported steady increases in the number of big bass they've caught during the past few years, and the prospects look bright for anglers to catch 10-pound bass in Florida.

"Bass regulations implemented in 1992, along with a return to normal rainfall that ended a long-term drought, have produced a favorable environment for bass to thrive," Shireman said. "A period of low stabilized water levels during the late 1980s inhibited bass populations across the state."

In 1992, the average weight of the largest bass caught from 197 tournaments was approximately 4 pounds. By 1997, the average weight increased to 7 pounds. Just last year, tournament anglers on Lake Okeechobee caught 170 bass over 8 pounds.

Although anglers have more than 7,500 lakes to choose from, the following ten have been selected by GFC fisheries biologists as top destinations for catching trophy bass in 1998.

Lake Okeechobee

Lake Okeechobee is consistently among Florida's top bass-producing lakes. Located in south central Florida, the "Big O" covers 730 square miles and is easily accessible from the east and west coasts. The lake is shallow, with ideal forage and habitat.

Anglers routinely catch 7- to 10-pound bass, and 10- to 12-pound bass occasionally show up. The lake record is 15 pounds, 5 ounces.

Anglers do well fishing in bulrush near Eagle Bay Island, Little Grassy Island and King's Bar at the north end of the lake. At the south end, anglers are successful in eelgrass in the South Bay area.

Fred London pulls in a large bass at Lake Okeechobee.▷





The largest bass (and the most) are caught using live golden shiners and casting into, or along edges of vegetation. Plastic worms and spinner baits are often productive.

Lake Okeechobee has a 13- to 18-inch slot limit on bass, meaning all bass between 13 and 18 inches must be released unharmed.

Sixteen boat ramps and numerous fish camps surround the lake. For more information contact the Clewiston Chamber of Commerce at (941) 983-7979 or the Okeechobee Chamber of Commerce at (941) 763-6464.

Lake Tarpon

For years, Lake Tarpon, a 2,500-acre lake near Tampa/St. Petersburg in Pinellas County, has produced excellent bass fishing. Most fish range from 12 to 15 inches long; however, quality and trophy fish are also present in good numbers. Biologists have observed anglers catching upwards of 20 fish with an occasional 10 pounder. Recently, a fishing guide reported catching a 10- and 13-pound bass on the same day.

Most anglers are successful flipping or pitching plastic worms along canal and bulrush edges. Offshore bass fishing is productive for anglers who fish around coontail and eelgrass beds with plastic worms, rattling crankbaits and jerkbaits. Fishing wild shiners also works.

There are two public boat ramps within county parks – one in Anderson Park, on the west shore off U.S. 19, and the other in Chestnut Park, on the east side of the lake off county Road 611. Some bank access, as well as boardwalks and piers, is available in both parks.

Low Bush Bay

This 400-acre phosphate pit in north Florida near White Springs is a fertile fishery, managed by the GFC in cooperation with Bienville Plantation. The lake is catch-and-release.

Low Bush Bay is unusual for Florida in that it is deep and contains a variety of underwater structures. This is a real contrast to most vegetated natural lakes in Florida. The food chain consists of abundant shad, which leads to excellent bass growth rates. Until 1997, the lake was privately owned and the present catch-and-release regulation provides anglers with higher than average catches ▷

Tom Evans

of bass. Anglers routinely catch 2- to-5-pound bass and occasionally 10-pound fish.

Plastic worms are best. A good technique here is to cast close to structure and parallel to the bank. This also works well with spinner baits after March, when the water begins to warm.

The reservations-only side of Low Bush Bay is open on Tuesdays and Saturdays, and then to a maximum of three boats with three anglers per boat. Call on Wednesday mornings to make reservations.

The lake has no facilities other than a boat ramp. You'll find a bait and tackle store near White Springs. For maps or to make reservations contact the GFC regional office in Lake City at (904) 758-0525.

Lake Weohyakapka

Lake Weohyakapka, also known as Lake Walk-in-Water, is a 34-acre lake off state Route 60 south of Orlando, east of Lakeland. Over the past five years, this lake has developed a reputation as an outstanding fishing spot for largemouth bass. It is not uncommon for anglers to catch up to 50 bass a day with many of those ranging from 5 to 10 pounds. Recently, anglers have reported catching several bass over 13 pounds.

Although hydrilla can be found over most of the lake, water levels are up and anglers may have to use fish finders to locate areas of submerged vegetation.

Most anglers use plastic worms, rattling crankbaits, jerkbaits and topwater plugs in isolated hydrilla beds or near the edges of topped-out hydrilla. Anglers drifting wild shiners in these areas are often successful.

There are two public boat ramps, one on Boat Landing Road in the southwest corner of the lake, and another on the west shore on Lake Walk-in-Water Road. There is little access for bank fishing.

Tenoroc Fish Management Area

Tenoroc FMA, northeast of Lakeland, offers some of the best bass fishing in Florida. This 6,400-acre property was extensively mined for phosphate between 1940 and 1978, and donated to the state in 1982.

Eleven lakes totaling 758 acres are open to public fishing. They range from 20 to 250 acres, and most are catch-and-release for bass. Each lake has specific regulations and angler quotas designed to produce a quality fishing experience.

Despite heavy fishing pressure, Tenoroc anglers can experience high catch rates, often one bass for every two hours fished, with some days much better. Bass are bigger than the statewide average, and the chance to land a trophy fish is excellent.

The 17-acre Derby Lake has disabled-accessible facilities and is reserved for physically-challenged anglers. The lake is intensively managed for a high-density bass population.

Tenoroc is open Thursday through Saturday from 6 a.m. to 5:30 p.m. Admission is \$3 per person. For more information or to make a reservation to fish, call (941) 499-2421.

Everglades Water Conservation Area 2 and 3

High water over the past three years has resulted in excellent bass fishing in Water Conservation Areas 2 and 3. Area 2 consists of 210 square miles of Everglades marsh connected with perimeter canals, and Area 3 covers 730 square miles of wetlands bordered by a canal system.

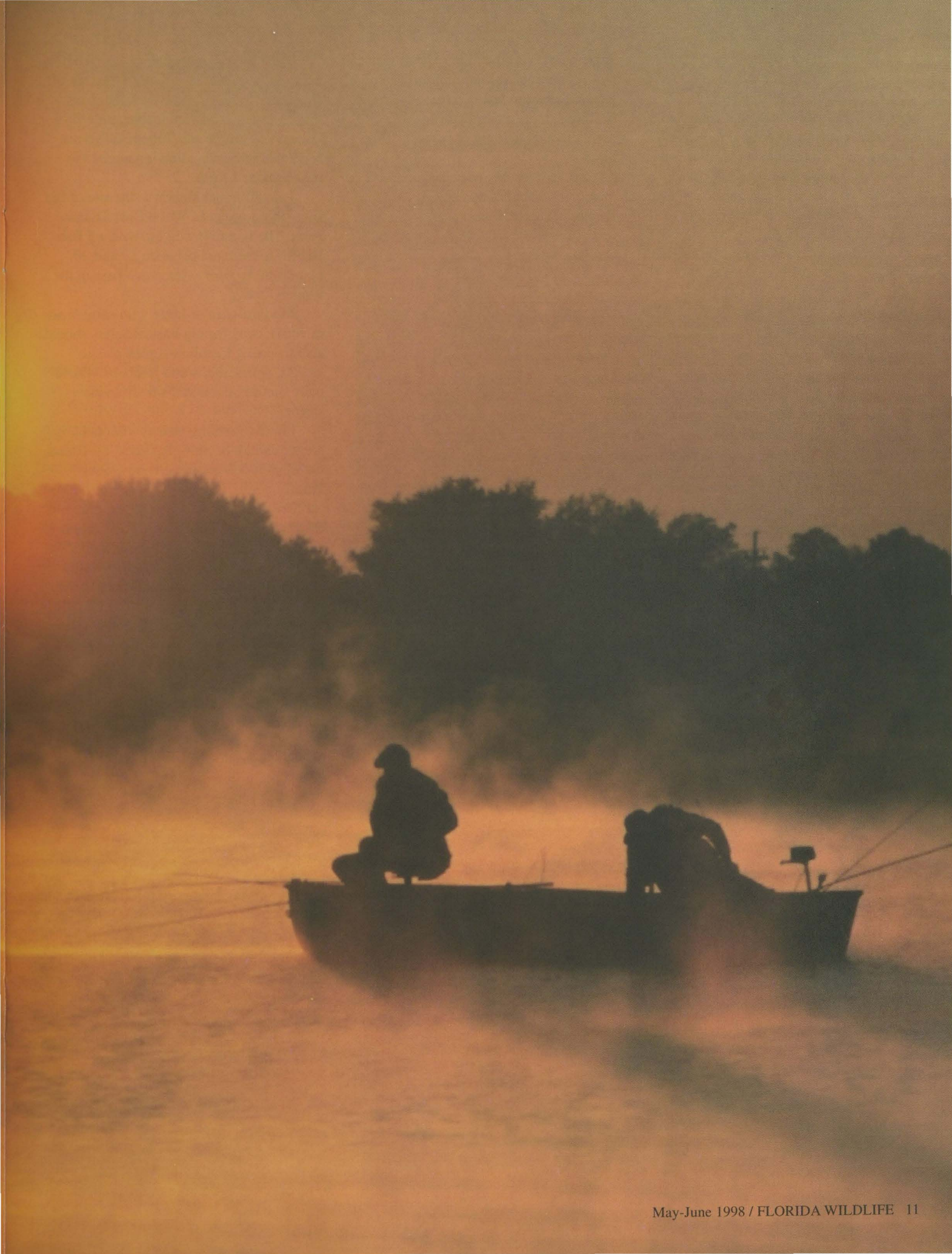
The best fishing usually begins in late spring, as water levels begin to drop and bass in the vast marshes are concentrated in nearby canals. Use plastic worms, minnow imitations and topwater poppers. Flipping directly into vegetation edges is also popular.

There is a no-consumption advisory on bass due to high levels of mercury in this area. Because of this, anglers routinely release their fish, which has resulted in high populations of 2- to 5-pound bass.

The L-67A and L-35B are two of the most popular canals in the area. The L-67A Canal has access at the north end at Holiday Park, off U.S. 27, where camping is available, and at the south end at the S-333 water control structure off Tamiami Trail (S.R. 41). The L-35B Canal access is at Sawgrass Recreation Area, just off U.S. 27. Boat ramps are at all three sites. ▷

Tenoroc boasts a high catch rate for anglers. ▷

Phil Chapman



Lake Kissimmee / West Lake Tohopekaliga

Located south of St. Cloud, the 35,000-acre Lake Kissimmee has recently been the cornerstone of quality bass fishing on the Kissimmee Chain of Lakes. Fish camps and guides have regularly reported fish over 10 pounds since 1994. A 14.7-pound bass was the biggest reported in the past year.

In addition to grass edges, successful

anglers target deep-water peppergrass and hydrilla during warmer months. Flipping plastic baits into heavy cover and slow-trolling shiners along hydrilla edges are productive techniques for catching big bass.

Six fish camps, one state park and three public boat ramps are available at Kissimmee. Non-boaters can wade from access points at some of the fish camps and boat ramps.

West Lake Tohopekaliga, an 18,810-acre shallow lake just south of the city of Kissimmee, can provide excellent bass fishing for the knowledgeable angler. Lakes Kissimmee and Tohopekaliga are separated by locks, allowing anglers to pass back and forth.

Lake Tohopekaliga was the site of the first 1998 Forrest L. Wood Bass Tournament. The winning weights with a 5 fish bag limit averaged between 17 and 20 pounds daily with at least two bass in the 9-pound range.

Medium-size or large wild shiners are effective baits for big bass. Anglers should also try using Carolina-rigged plastic worms, spinnerbaits and jerkbaits. These baits should be worked slowly in the spring.

Popular fishing spots in Tohopekaliga are the mouth of Shingle Creek, St. Cloud Canal, North Steer Beach and Lacier Point.

Two fish camps, one marina, one county park and four public boat ramps are situated around Lake Tohopekaliga. Two fishing piers, a boat basin, and numerous other access points await bank anglers along the north end of the lake.

Farm 13 / Stick Marsh Reservoir

One of the hottest bass lakes in the past decade is the Farm 13/Stick Marsh Reservoir near Fellsmere, west of Vero Beach. The reservoir was created in 1985 by flooding 6,500 acres of farmland. Originally it was not uncommon for anglers to catch up to 100 bass per day. This year should also be a banner year, based on electro-fishing surveys. Biologists expect a large crop of fish ranging from 8 to 12 pounds.

Approximately one-half of the lake is covered with hydrilla. Anglers should do well fishing in the south end of Farm 13. Plastic worms, spinner baits, crank baits and topwater prop baits will produce good results. Golden shiners are the top choice for anglers looking to catch a trophy fish here.

The current regulation on the reservoir is a daily bag limit of one bass, and it must be over 24 inches long. There is one boat ramp, with a parking lot and rest rooms. No gasoline or food is available on site.

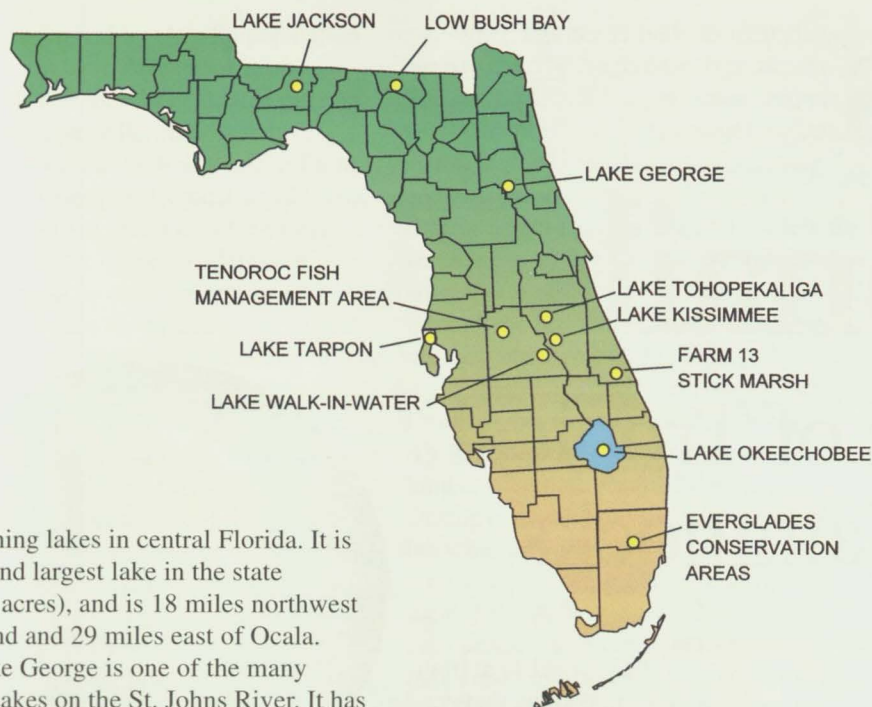
Lake George

Lake George is one of the premier



Phil Chapman

Bass at Tenoroc are bigger than the statewide average.



bass fishing lakes in central Florida. It is the second largest lake in the state (46,000 acres), and is 18 miles northwest of Deland and 29 miles east of Ocala.

Lake George is one of the many natural lakes on the St. Johns River. It has extensive vegetation that provides excellent habitat for bass. Wade fishing in eelgrass with topwater artificials or plastic worms fished at the surface is productive. Fishing with shiners is an excellent method for trophy bass during spring spawning season.

Hotspots on the lake include Juniper, Salt and Silver Glen spring runs on the eastern shoreline. In the early spring, look for bass to congregate at the jetties on the south end of the lake. To the north,

anglers do well casting deep-diving crankbaits near old dock structures along the northeast shore and off Drayton Island.

Anglers can get to the lake through numerous fish camps and landings both on the lake and river. There is no pier or bank fishing access on Lake George.

Lake Jackson

Lake Jackson is a shallow, vegetated

4,000-acre natural lake just north of Tallahassee. Much of the lake goes dry every 25 years due to low amounts of rainfall and drainage through several sinkholes. The lake level is now high. Bass populations are doing very well and fishing has been outstanding.

The best area to fish is in the north and central portion of the lake with live golden shiners. Anglers typically drift-fish in open water areas (6 to 8 feet) while free-lining shiners or using light weights. Small topwater lures or plastic worms are effective in late spring and early summer. There is a 15- to 19-inch slot limit for bass on the lake (bass between 15 and 19 inches must be released).

One fish camp and six public boat ramps surround the lake. Bank fishing is minimal. ●

Mark A. Trainor is a GFC Publications Director in the Tallahassee office.

For more information on Florida's freshwater fishing opportunities and fishing forecasts, visit GFC's home page at www.state.fl.us/gfc/. For an instant Florida fishing license call toll-free **1-888-FISH-FLORIDA**

Below: The quality of fishing at Lake Jackson makes it a Panhandle Paradise.



Peggy Perkerson

Liguus Tree Snails

Living Gems of Tropical Hardwood Hammocks

Text and Photographs by Jeff Ripple

The heavy deluge from a passing morning thunder shower had dwindled to a sprinkle by the time I reached the edge of a tropical hardwood hammock nestled among a forest of slash pine in the Long Pine Key region of Everglades National Park. I contemplated the thick tangle of shrubs and vines that surrounded the hammock, searching for a path of least resistance. There wasn't one. Two zebra longwing butterflies fluttered nearby, lingering over a clump of ferns, and then disappeared into the hammock. Their chosen route seemed as good as any to follow, and I plunged through the vegetation after them. After a brief but sweaty struggle, I reached the hammock's interior and paused to wipe my face and let my eyes adjust to the dim light.

My purpose on this particular journey



into the hammock was to photograph various color forms of *Liguus fasciatus*, a tree snail considered by its admirers to be the "living jewel of tropical hardwood hammocks." Ranging in overall color from white to nearly black, the shells of most *Liguus* snails (or "ligs") are wrapped in multi-hued whorls of emerald green, brown, orange, yellow or pink. Some varieties are spectacularly marked, while others are quite plain. Fifty-two native color varieties are known to exist.

In the United States, these snails are found only in tropical hardwood hammocks of extreme southern Florida and



The shells of most *Liguus* snails are wrapped in multi-hued whorls of emerald green, brown, orange, yellow or pink.

the Florida Keys. Florida's lig population is believed to have descended from individuals that may have floated over on logs from Cuba or Hispaniola, where similar species can be found today. From this original group of tropical immigrants, more than fifty distinctive color forms developed in the relative isolation of single hammocks or small groups of hammocks in the Everglades, Big Cypress Swamp and the Florida Keys. Some of the color forms may now be extinct due to overcollecting and loss of habitat. Other color forms have been cross-bred by collectors and then released, potentially clouding the genetic pool of distinct and/or isolated wild populations.

Ligs are typically found on smooth-barked hardwoods such as wild tamarind, pigeon plum, poisonwood, mastic, myrsine, Jamaica dogwood and bustic. You can find them throughout the year, but they are most active from May through September during southern Florida's rainy season, especially after a heavy rain when they are feeding.

The snails may cover more than 25 feet a day as they scrape tree bark for microflora (such as algae, fungus and lichens) with a rasp-like tongue called a radula. They do not eat leaves. The snails glide along the tree bark by contracting their large foot over a thin layer of mucus secreted from special glands in the sole of the foot. The head, located at the front of the foot, sports two pairs of retractable tentacles. At the tips of the longer pair of tentacles are primitive eyes that may be able to distinguish close objects and detect the difference between light and dark. The snail uses its smaller tentacles to help feel its way around.

When ligs are actively moving, they are particularly vulnerable to predators. The shell offers some protection, but the snails frequently excrete a watery, bitter-tasting liquid intended to convince any creature that picks one up to drop it. Raccoons have gotten around this defense mechanism by popping off the top three whorls of the shell and extracting the snail through the top. Birds will poke a hole in the side and then pull the animal out.

Ligs are less active during southern Florida's dry season (October through April) and spend much of their time in a kind of hibernation called estivation. During estivation the snails find suitable branches to which they fasten themselves with a mucus, sealing the entrances to their shells in the process. This mucus door protects them from drying out. If you pull a snail off its branch during estivation and break the mucus seal, it will most likely dry out and die. When warm spring rains come, rainwater softens this seal, and the snails emerge from their dormant state to begin feeding.

In the Florida Keys where Jamaica dogwood is common, *Liguus* tree snails may often be seen in masses along the upper branches of a large dogwood in the spring, after their estivation.

In late summer ligs mate. They are hermaphrodites (containing both male and female organs), and after mating, both snails usually leave the encounter pregnant. Each snail comes down to the base of the tree to dig a hole in the leaf litter and lay approximately fifty pea-sized eggs. The following spring the eggs hatch, and tiny "button" snails emerge to begin their first long trek up the tree to feed. Each button will add two or three whorls

to its shell during its first year, one or two whorls its second year, and then perhaps one whorl each year after that until it is two to three inches in length. Most *Liguus* snail shells spiral to the right, but occasionally "lefties" are found. The left-spiraling form, technically called sinistral, is extremely rare.

Conditions were perfect for observing ligs this steamy late May morning, and I was able to photograph several snails as they moved about on the trees.

Currently, the *Liguus* tree snail is listed as a species of special concern in Florida, making it illegal to collect the shells or live snails without a permit. Habitat destruction has been instrumental in putting the snail in its precarious position, and protection of tropical hardwood hammocks is critical to ensure the continued survival and the diversity of color forms of this living gem. In addition, mosquito spraying threatens tree snails. To protect them, butterflies and other creatures in the hammocks, chemical pesticides are not used in John Pennekamp Coral Reef State Park or the Key Largo Hammocks State Botanical Site.

Predators include raccoons, birds (especially blue jays and grackles), black rats, hermit crabs and the predatory, carnivorous snail, *Euglandia*. Imported fire ants have also proven to be a serious menace. 🐜

Photographer and writer Jeff Ripple has authored five books of interpretive natural history, including Southwest Florida's Wetland Wilderness. He and his wife run a Gainesville-based sea kayaking outfit, Wild Florida Adventures.



Saving The Florida Keys

By Lt. James T. Huffstodt

“Many of the properties have serious environmental problems that need to be addressed, from dilapidated buildings and extensive dumps that need to be removed, to filled and ditched wetlands that need to be restored,” Schuette said.

The key components of what will soon become Florida’s newest environmental area lie scattered like precious ecological jewels among the tropical islands of the Keys.

The Florida Keys Ecosystem Project consists of 26 separate parcels totaling approximately 4,500 acres, according to Jim Schuette, the Game and Fresh Water Fish Commission’s (GFC) Everglades Region wildlife biologist, who has served as project manager.

The parcels are located from Key Largo all the way down to Sugarloaf Key. Formerly known as the Tropical Flyways and the Hammocks of the Lower Keys, these two projects were combined in 1995 to make the Florida Keys Ecosystem Project.

The drive to save these ecological treasures was initiated by the Nature Conservancy, the National Audubon Society and numerous individuals who believe protection is imperative because the areas consist of valuable and rare habitat, provide a home for many threatened and endangered species, offer migrating birds important “way stations” on the road north and south, and give Floridians a recreational and educational resource.

In 1990 the area was proposed for purchase using P-2000 funds. The Land Acquisition Advisory Council ranked the project number five on the Conservation and Recreation Lands Program (CARL) acquisition list in 1996, making money available to begin land purchases. The area is currently fourth on the priority project list.

“Many of the properties have serious environmental problems that need to be addressed, from dilapidated buildings and extensive dumps that need to be removed, to filled and ditched wetlands that need to be restored,” Schuette said. ▷



Curry Hammock in the lower Keys, by photographer James R. Valentine ▷



"Additional management resources will be sought out for these situations, including mitigation funds and grants... to go towards restoring the little remaining natural Keys habitat," he said.

The GFC-managed properties will run from Key Largo south to Cudjoe Key and collectively will be called the Florida Keys Wildlife and Environmental Area (WEA). The largest single property, Middle Torch Key, consists of 800 acres.

"The 15 GFC-managed units will ultimately total 3,453 acres," Schuette said. "As of February 1, 1998, approximately 600 acres had been purchased. Acquisition of all the areas should be completed by the year 2000."

Schuette anticipates that the majority of the targeted parcels will be purchased through CARL. The goal is to protect all 26 areas, with 15 managed by the GFC and the other 11 managed by the Department of Environmental Protection (DEP).

"We recently opened to public use the first unit within the new Florida Keys WEA," Schuette said. "The Spoonbill

Sound unit is located on Cudjoe Key, and encompasses 38 acres of hardwood hammock, a transitional zone and mangrove swamp. A half-mile hiking trail runs through the area."

The Florida Keys WEA provides outstanding examples of natural Florida Keys plants, including tropical hardwood hammock, freshwater wetlands, tidal salt marshes and mangrove forests. Tropical hardwood hammock is a unique forest type consisting of tree species of mainly west Indian origin, and is limited to extreme south Florida and the Keys.

These native plant communities provide essential habitat for a wide variety of wildlife, including the endangered key deer and silver rice rat, as well as the white-crowned pigeon and Florida tree snail, both species of special concern.

But these are only a few examples of the unique wildlife found on the WEA – at least 29 species of protected animals are known to occur.

"Another purpose is to provide convenient habitat 'stepping stones' for use by migratory birds flying north and south," Schuette said. "These include the endangered peregrine falcon, the red-shouldered hawk, the red-tailed hawk and the kestrel."

Residents of the Keys will benefit from the new area, according to Schuette.

"We plan on offering opportunities for hikers, bird watchers and other non-consumptive recreational users," Schuette said. "At the same time our management will stress protecting the areas from development, removing trash and eliminating exotic vegetation."

"Public use that may be appropriate for one area may not be appropriate for another. We will attempt to involve local citizens from the beginning."



Key deer are the smallest members of the white-tailed deer family. Their range is limited to the Florida Keys.



Phil Frank

Above: A bridge to Wakoo Key transcends treacherous reef tracts that sank hundreds of early Spanish and English ships.

"Each of the 15 parcels presents different opportunities and challenges based on their location, habitat, access and adjacent land uses," Schuette continued. "Public use that may be appropriate for one area may not be appropriate for another. We will attempt to involve local citizens from the beginning."

The importance of the project is self-evident to conservationists who understand the urgent need to conserve the priceless natural treasures of the Keys now threatened by rampant development and overpopulation. The creation of the Florida Keys WEA Project will stand as one of the most important conservation acquisitions of the decade. 🐭

Lt. James T. Huffstodt is the public information director for the GFC's Everglades Region.



Phil Frank

The nocturnal Key Largo cotton mouse is found only in the upper Keys of Florida.

Southern Exposure

The Great White Heron

Text and Photographs by Bob Grytten

Florida Bay, between the southern tip of Florida and the Keys, is home for most of the great white heron in the world, numbering about 2,500. This pure white bird, once thought to be a separate species, is now considered a color variation of the great blue heron.

The great white heron's preference for marine habitats accounts for its concentration in the Keys. It nests on red mangrove islands along with a wide variety of other birdlife including pelicans, egrets and other herons. Colonies of these mixed residents can usually be heard from some distance, especially in the mornings as they carry on their greeting and courtship rituals.

I traveled to the Keys to photograph this beautiful bird. The Lower Keys, including the Great White Heron National Wildlife Refuge, would be the center of my photographic activities. The five-day scheduled didn't allow much time. My persistence and luck paid off with a private viewing of a pair of great white heron.

The winds had been blowing about 20 mph, not unusual for February, which ruled out getting to islands by boat. I heard of recent heron activity near Cudjoe Key, about 25 miles north of Key West along the Overseas Highway, so I went there.

Early morning light provides warm, rich colors, but the colors turn flat a few hours after sunrise, so the optimum window is narrow. While many birds are busy concentrating on feeding and will

This pure white bird, once thought to be a separate species, is now considered a color phase of the great blue heron.



usually ignore a photographer, one has to be careful not to harass them so it's often slow going. That, coupled with limited "good" light, makes it important to be working right at daybreak.

The first two mornings I was able to get some good shots of a little blue heron and a snowy egret, but the great white heron was farther away than I wanted.

On the third day, I spotted another great white, but it was well-camouflaged, and couldn't be coaxed out for a clear picture. Great white herons have a knack of avoiding notice. If near cover, they will crouch with only their heads peering above the leaves. The leaves act as camouflage and shadows break up the bird's outline, making it almost invisible.

When they're near cover they freeze. When in the open, they usually take flight. Film won't record contrasts in colors and shades as vividly as our eye sees them, so a photo of the great white in the bushes was not what I was after.

The fourth day it rained.

My last day. One more try. The wind was about ten miles per hour. The sun had just broken over the horizon. I headed out of Key West toward Cudjoe Key, hoping to sight a bird while driving. The morning was sunny and beautiful. I crossed numerous bridges; the road bank dropped sharply to the blue-green water. ▷



Then I glimpsed something white in my rearview mirror. I swung the car around and approached slowly along the shoulder. The car shook as other cars whooshed by. Edging closer, I could finally see it. At first I thought it was an egret, but no! Its bill was thicker and the yellow legs confirmed it. A great white heron!

I spotted a second one by a bridge a hundred feet away. I wasn't sure what they were doing, because the herons generally stalk their prey – herring, sardines and mullet – at night, and rest on mangrove islands during the day.

I knew to stay in the car. It makes a good blind in areas where birds are used to traffic. I attached my camera to the monopod for better support of the heavy Nikon 300mm lens. Positioning it between the seats and aiming out the open passenger window, I adjusted the focus and took my first quick shot, not knowing if either one or both of the birds would take flight. My heart pounded.

Fortunately they ignored me. I moved the car about ten feet closer. They

appeared preoccupied. I concentrated on the heron closest to me, taking full-frame shots. Then the bird began walking around nervously among the coral rocks. Out of the corner of my eye, I could see the other one moving my way, his neck stretched, head high.

It was some kind of ritual. The larger bird took flight, landing a few yards away, right wing down at its side as if it were broken. Its feathers were ruffled out now, head held high in a curved position. The other bird approached, wading closer to shore. By the time it arrived they were both in the water. They came closer together, looking at each other.

Then suddenly, they leapt into the air – face to face, wings flapping, bills parted. They leapt again and again, water splashing, necks and bodies stretched high.

I lost track of the frame I was on and only hoped I wouldn't run out of film.

All of a sudden, the herons stopped as though nothing happened. One was in a crouched position, neck and head pulled in. The other floated on the water like a

swan, wings stretched out, head held high. They were unbelievably beautiful, and I was there. I became lost in the moment.

I quickly reloaded my camera. Dare I chance getting out of the car to get closer? Just then I spotted a hitchhiker approaching, thumb out. If he walked by the birds first, surely they would take flight. I opened the door and slid out. There was no time left to stalk carefully. I simply moved quietly closer. I managed to take six more shots before the birds took flight.

The golden morning light cast an aura over the entire scene. I was shaking. I looked around. No one else had seen this. I not only had photographed the great white heron I had hoped for, but I had also been privileged to witness something I would never forget. ●

Bob Grytten is a photographer/writer who lives in Holiday. His work has been published in such magazines as International Wildlife, Sailing, Southern Boating and Nature Photographer.



Native to south Florida, white herons rarely leave the Florida Keys.

BACK – BY POPULAR DEMAND

GFC Offers 5-Year Freshwater Fishing License BONUS PACKAGE



The Florida Game and Fresh Water Fish Commission (GFC) made over a thousand anglers happy last year when it first included a bonus package with a five-year freshwater fishing license. This year the GFC expanded the bonus package when you buy the multi-year license by May 31, 1998.

The package includes tackle samples and magazines worth more than \$50 along with special deals and rebate offers worth hundreds of dollars.

When first offered in 1997, the promotion resulted in a six-fold increase in five-year freshwater fishing license sales. The response delighted the GFC. The agency used the money to invest in fish and wildlife conservation programs. Anglers and sport-fishing businesses also liked the promotion. It gave manufacturers, publishers and other participants a chance to put their products in the hands of dedicated anglers and license buyers an opportunity to sample new products. Among those buying a five-year license, over three-quarters said the overall value of the bonus package was either good or great.

This year the sample value is doubled. It includes a fanny-pack from Shakespeare and lures made by manufacturers such as Cotee, Culprit, Phantom, Rapala, Reaction, RJ Tackle, Shakespeare, Snag Proof, and Storm; magazines like *Bass Destinations*, *Florida Fishing and Boating*, and *Florida Wildlife*; a coupon for free copies of *Florida Sportsman* and *Outdoor World*; discount coupons for BassPro Shops; discounted memberships in "Fishing Made Cheap," and the International Game Fish Association. A variety of special deals complete the package.

A five-year freshwater fishing license costs \$61.50 and comes with the free bonus package if purchased before the end of May. All you need to do is buy a license including at least five-years of freshwater fishing privileges,* by calling **1-888-FISH-FLORIDA** (a \$3.95 surcharge applies) or purchasing it from any tax collector. Fishing privileges are granted immediately. The license along with the bonus package will be mailed to you within a month.

*Lifetime licenses and five-year combination licenses that include freshwater fishing privileges are eligible.

The sun was just beginning to tip the trees when I completed my chores. That was good, for it left the rest of the day free for more spiritually pleasing pursuits. Since moving to rural northeast Florida I have come to value the time I am allowed to spend in the woods and near streams and rivers. I decided that today I would have a lunch from the land and take some time to contemplate higher things. For the moment, however, I was solely concerned with the menu for the midday repast.

Before beginning my trip to my own outdoor deli it was necessary to gather a few of the essentials for the effort. Included in my gear was my old Smith and Wesson Model 422 pistol, two or three zip-lock plastic bags and a camouflage head net of the type used by bowhunters. These items I either placed

into or hung from the belt of a fanny pack that I use for regular season hunting trips. Equipment ready, I set forth about 8 a.m. to accumulate the raw ingredients for a gourmet meal.

Much like my favorite grocery store, the first items to be had were vegetables. Near my wife's roses, not 50 feet from our front door, grew a small patch of chickweed, the first component for a salad. I gathered about 1/4 cup of young leaves and placed them into one of the plastic bags. Walking a little farther, I came upon some new dandelions and added a small handful to the bag of chickweed leaves.

I proceeded down the path that leads to the rear of my property and came to a small clump of blackberries. At mid-July, it was a little late in the season for berries, but again I added a small quantity of new-growth leaves to the bag. These would

complete the salad. A bit farther down the path I came to huckleberry bush that still bore a few of the succulent berries. A few moments of plundering rewarded about cup, which I filed into another bag.

Now was the time to begin an earnest search for the entree and accompaniment. I had been keeping an eye out for a plump, young cottontail rabbit, as these were the only game species legal to take at this time of year. They were not, however, being cooperative. The search continued.

Approximately three quarters of a mile down a winding forest trail lies an old manmade pond that at one time may have been a stock watering hole. It was now forgotten and hidden in the woods, and was only accessible to those who knew of its existence. (And we aren't telling.) I made a careful approach to the pond in the hope of spotting a watering

A Nearly Free Lunch

By Jack M. Wright



Blackberries by Elsie Jones



William J. Weber

Above: Dandelions can provide fresh greens for a salad.

Cattails, a versatile food source, can be eaten raw, boiled or used as a source of flour.



Elsie Jones

bunny, but its shore was empty of signs of life.

Looking around, I found a willow and removed a branch about 8 feet long. I stripped it of leaves and branchlets and took a small plastic pouch from my wallet. Ever since Boy Scout days I have carried a length of 6# monofilament, four #8 fish hooks and a small piece of lead tape of the type used by golfers to weight club heads. These items are very compact and fit into my billfold without a bulge. They are my "American Express," since I never leave home without them. A few seconds later I had assembled my tackle.

In all truth, I have never had much trouble catching fish in truly wild ponds and streams. Fish that do not see anglers are rather unwary. The biggest problem comes in trying to catch bait. A few minutes of beating the bushes with my hat rewarded me with two grasshoppers and a small frog that apparently had been asleep. Using this live bait I was able to catch two small sunfish of about one-half pound each. Good enough. I filleted them at lake side, left the offal for the crayfish and placed them in the mesh head net.

That only left one item to find. A search through the cattails revealed a number of new shoots just emerging from the water. I cut eight of these and deposited them in the last plastic bag, then returned home.

Upon entering the house I noticed that I had been gone an hour and a half. Not bad for a gourmet meal.

The first order of business was salad dressing. I squeezed enough of the blueberries through a cloth to give me two tablespoons of juice. To this I added 1 tablespoon wine vinegar, 3 tablespoons olive oil, a pinch each of salt and pepper, 1/4 teaspoon basil and a dash of sugar. I put this in the refrigerator to allow the flavors to blend.

Since it was only 9:45 a.m., I had time to meditate for a short time before preparing my repast. People with less sensitive souls would refer to my periods of meditation as "naps." They obviously do not realize that the closed eyes, open mouth and snores are indicative of having achieved a higher plane of awareness and nothing so mundane as sleep.

At noon, I prepared a poaching liquid of water, lemon juice and dill weed in an 8-inch skillet and brought it up to 180 degrees. Another small saucepan filled ▷

with salted water came to a boil. I wrapped the filets in cheesecloth and placed them in the hot skillet, then dropped the cattail shoots in the saucepan. I washed the salad greens with blueberry vinaigrette.

Due to their small size, the filets needed only about five minutes cooking, which was also the necessary cooking time for the cattails. I ate the fish with only the addition of a few drops of lemon, but added butter melted with parsley and powdered mustard to the cattail shoots, which tasted very much like asparagus.

Items included with this meal not gathered in the wild were a glass of white wine and a slice of crusty French bread. For dessert I enjoyed the remainder of the wild blueberries with a sprinkle of sugar and a dollop of whipped topping. Mighty fine, if I do say so myself.

There are literally hundreds of variations on this theme. Nature has provided many plant and animal foods for us. The catch, especially with regard to wild plant foods, is that several simple rules must be followed in order to avoid illness or death.

Never trust common or local names for plant foods. Herein I have referred to berries I gathered both as huckleberries and wild blueberries. They are also locally known as billberries, deerberries and buckberries. These names seem to be interchangeable among four or five different species of plants. Be sure of what you have and trust only the Latin names for accuracy.

Obtain a good, concise reference book with photographs, not pencil sketches, of the subject plants. In Florida the standard reference work seems to be *Florida Wild Flowers and Roadside Plants* by C. Ritchie Bell and Bryan J. Taylor (Laurel Hill Press, Chapel Hill, NC: 1982). This work contains good color photographs and precise descriptions.

In addition, you will need a reference work on the preparation of plant foods. I have used the Foxfire books for this purpose. While they do not have a complete listing of all edible plants to be found in Florida, there is sufficient diversity and quantity of native plants described to be of great use to the forager.

Knowledge of proper preparation is essential. For example, poke salad, the old

Southern standby, is highly toxic if eaten raw or not cooked sufficiently. Elderberries make tasty jelly and wine but must be cooked or fermented prior to use, as they too can be toxic raw. Cross-reference your identification book to your preparation book, again by Latin names only.

Insofar as animal foods are concerned, most anything that walks, crawls, swims or flies is a source of protein so long as the object of your culinary desire does not feed on carrion. This pretty much rules out crows (even though they have been eaten when known by the more acceptable name of "marsh hare"), buzzards and vultures, and opossums. Yes, I understand that 'possum is considered by many to be a delicacy, but they still eat carrion. For this reason, most old-time 'possum hunters catch the critter alive, then feed him out on corn prior to cooking.

All game animals, as well as most furbearers, are good to eat to a greater or lesser degree. I find beaver to be excellent, especially the gelatinous meat of the tail. Muskrat is also very good, but I have no experience with nutria. 🐾

Jack Wright is a retired highway designer and lifelong outdoorsman. He lives with his wife, dogs and about 50 chickens in rural Bradford County.

Elderberry Pie

3 cups elderberries, fresh or frozen
(To freeze, pull from stems, wash, drain and pack in containers.)

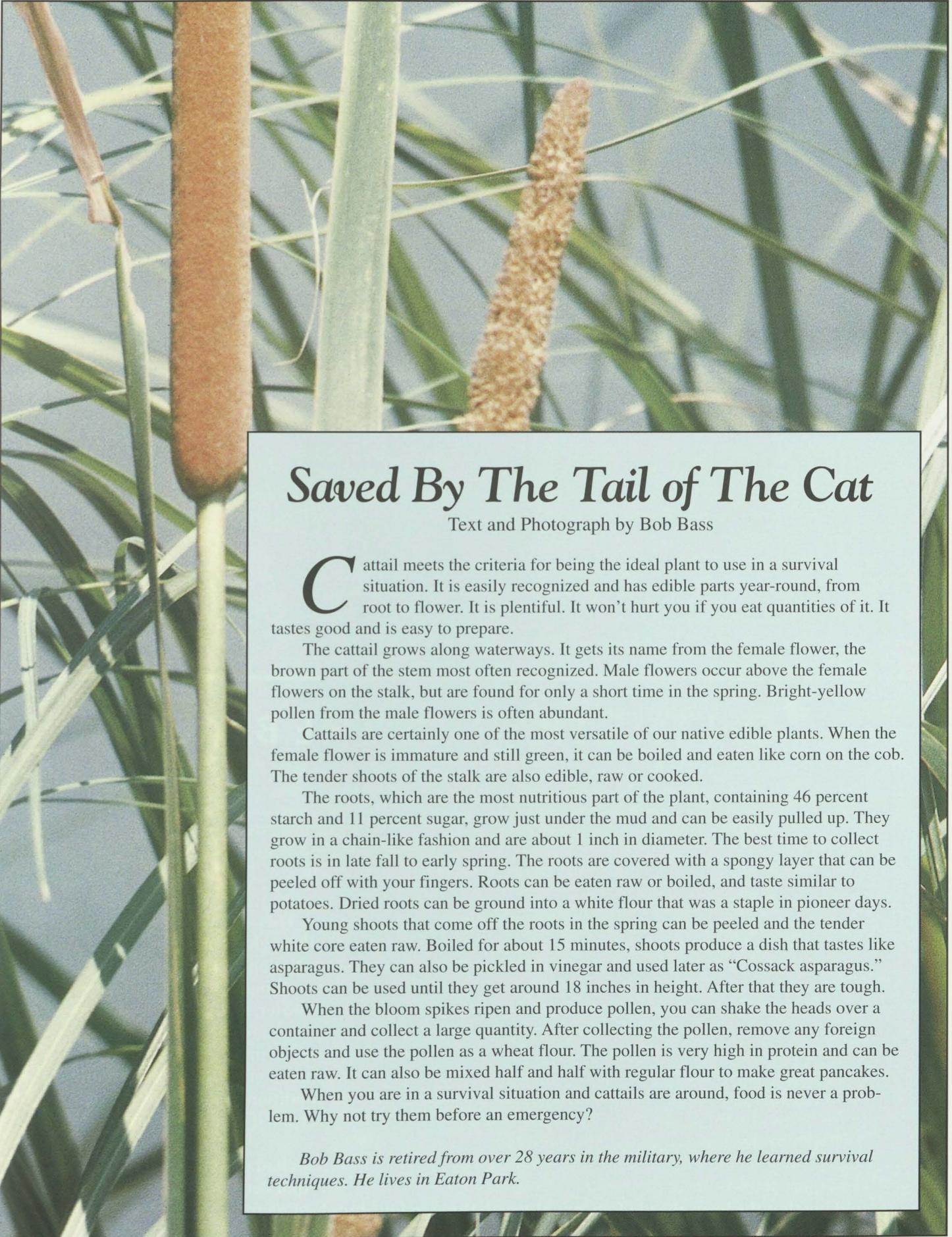
$\frac{3}{4}$ cup sugar or $\frac{1}{2}$ cup honey
1 tablespoon lemon juice

Place berry mixture in 9-inch pastry-lined pie pan. Dot with 1 tablespoon butter. Moisten edge of crust with water. Put on top crust and crimp edges with fingers. Cut slits in top and brush top with milk. Place in preheated 400 degree oven. Bake 45 minutes or until browned.



Highbush blueberries
by Peggy Perkerson

A wild berry vinaigrette can add a fresh taste to salads.



Saved By The Tail of The Cat

Text and Photograph by Bob Bass

Cattail meets the criteria for being the ideal plant to use in a survival situation. It is easily recognized and has edible parts year-round, from root to flower. It is plentiful. It won't hurt you if you eat quantities of it. It tastes good and is easy to prepare.

The cattail grows along waterways. It gets its name from the female flower, the brown part of the stem most often recognized. Male flowers occur above the female flowers on the stalk, but are found for only a short time in the spring. Bright-yellow pollen from the male flowers is often abundant.

Cattails are certainly one of the most versatile of our native edible plants. When the female flower is immature and still green, it can be boiled and eaten like corn on the cob. The tender shoots of the stalk are also edible, raw or cooked.

The roots, which are the most nutritious part of the plant, containing 46 percent starch and 11 percent sugar, grow just under the mud and can be easily pulled up. They grow in a chain-like fashion and are about 1 inch in diameter. The best time to collect roots is in late fall to early spring. The roots are covered with a spongy layer that can be peeled off with your fingers. Roots can be eaten raw or boiled, and taste similar to potatoes. Dried roots can be ground into a white flour that was a staple in pioneer days.

Young shoots that come off the roots in the spring can be peeled and the tender white core eaten raw. Boiled for about 15 minutes, shoots produce a dish that tastes like asparagus. They can also be pickled in vinegar and used later as "Cossack asparagus." Shoots can be used until they get around 18 inches in height. After that they are tough.

When the bloom spikes ripen and produce pollen, you can shake the heads over a container and collect a large quantity. After collecting the pollen, remove any foreign objects and use the pollen as a wheat flour. The pollen is very high in protein and can be eaten raw. It can also be mixed half and half with regular flour to make great pancakes.

When you are in a survival situation and cattails are around, food is never a problem. Why not try them before an emergency?

Bob Bass is retired from over 28 years in the military, where he learned survival techniques. He lives in Eaton Park.



ON THE TRAIL OF THE BEAR HIKING BRADWELL BAY

Text and Photographs by Doug Alderson

The tracks were unmistakable – black bear. A big one. They were pointing west, the same direction I was heading on the Florida Trail through Bradwell Bay, a 24,600 acre wilderness in the heart of the Apalachicola National Forest.

Bear tracks are something I never encounter when walking down one of those heavily manicured nature trails where boardwalks span any hint of water. In Bradwell Bay, one almost expects it. The often wet and overgrown Florida Trail seems like a feeble attempt at penetrating the massive jungles of titi bushes, smilax, gallberry, dense cypress and gum forests, and hidden blackwater ponds. Except for the orange blazes, a summer's growth can obscure the path. Having few visitors doesn't help. The density and often wet conditions make Bradwell Bay far down on the list of destinations for most Sunday strollers. In fact, I felt sure that more bears used the Bradwell Bay trail than people.

For over a mile I followed the bear tracks. The bear's heavy paws had mashed leaves into mud more than an inch. I looked at my own prints. They were half that deep. A little basic math told me that the bear ahead of me might weigh three to four hundred pounds. Maybe more.



slash pine before it was struck by lightning. A state record pond cypress was discovered in 1983, but researchers could not locate the tree again to update verification. Could this area of record-sized trees also boast a record-sized black bear?

I helped the late Jack Deasy and other volunteers blaze part of the Florida Trail through Bradwell Bay in the mid to late 1970s. We used a compass and lots of red flagging, and we never walked out of earshot of another person. It is that easy to

get lost. I wondered what old Jack would have thought of the trail we blazed ending up as part of a bear's territorial boundary. It probably would have pleased him to no end. Bradwell Bay belongs to the wildlife as much or more than to its occasional human visitors. Its wildness is due to its wetness and near impenetrability, and the fact that it fell into the public domain in the 1930s. Early loggers got frequently bogged down and frustrated. The old tram rail lines abruptly end where the big swamp begins. ▷

briefly lost the bear's tracks through a stand of longleaf pines, but when I entered the "big tree area," a place where virgin cypress, gum and slash pine stand tall, I found tracks again. This time they led me to a large twin cypress tree. Where the two trees were joined together at the base, a bear had clawed deep furrows in the bark and wood. In fact, I saw old scars too. This was a territorial marker tree for a large bear, right on the trail! I felt a tinge of uneasiness. The claw marks were as large as my own hand. This bear made its boundary very clear, and I was walking alongside it.

As evening shadows lengthened, I stepped more cautiously. Did the bear know I was there?

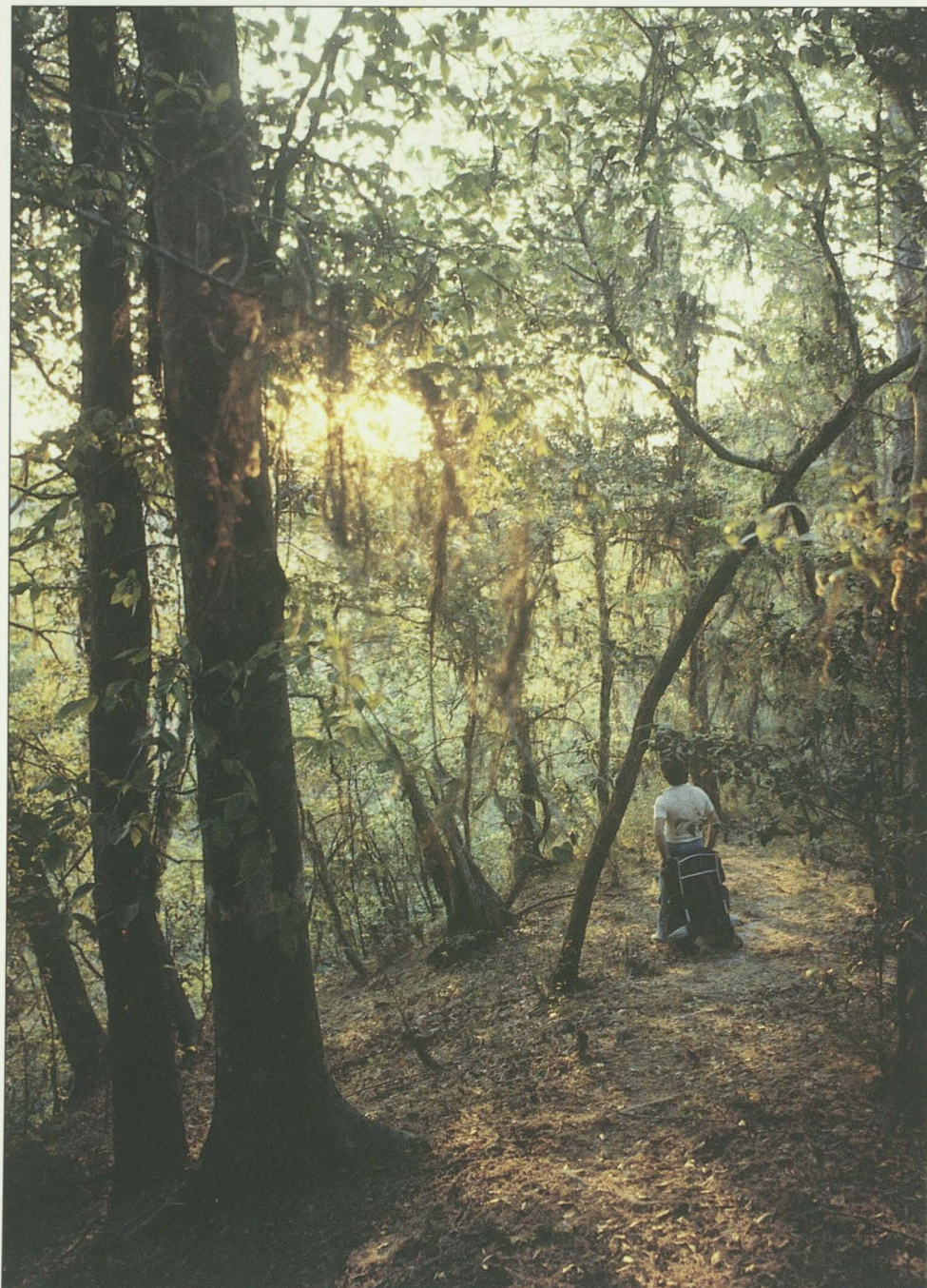
I was thinking about bear biologist Terry Debruyne's advice. "If approached by a bear," he said, "don't display prey behavior, like turning or running. Make lots of noise – yell, bang a stick against a tree – to frighten the bear away. They want to avoid you. You can also back up slowly, but if the bear keeps coming, stand your ground. Make louder noises."

"You don't want to surprise the animal," he said. "You want to give it plenty of room to maneuver."

He had also reminded me that a bear sighting can be a wonderful thing, invigorating and exciting. He said when people speak of bear encounters, "They can recall in great detail smells and colors. It heightens their awareness."

"Bears are to be enjoyed, not feared," he said.

I became immersed in the beauty and majesty of the virgin trees and lost the bear trail again. Delicate shafts of light slanted through the thick overstory. Recently, two national co-champion Ogeechee tupelo trees were found here. The area once boasted the state record



*The author helped blaze this trail back in the 1970's
Top left: Bear claw marks on a tree at Bradwell Bay.*



Bradwell bay is wet, remote and home to a variety of wildlife like this white ibis.

Hunters poke into Bradwell Bay on occasion, but they are ever wary. The area supposedly is named for an early hunter named Bradwell who wandered lost for several days in the thicket before making his way out, tired but alive. He abandoned his shotgun in the crook of a tree so he wouldn't have to carry it. No one ever found the old gun.

The second part of the swamp's name comes from a little-known definition for

bay: "a broad stretch of low land between hills." There are no hills on either side of Bradwell Bay, just higher ground. A change of a few feet – or inches – in this country can have profound effects on vegetation and the water table. Topographically, Bradwell Bay has been described as a huge, irregularly shaped saucer, one that easily holds water, although rarely more than waist deep.

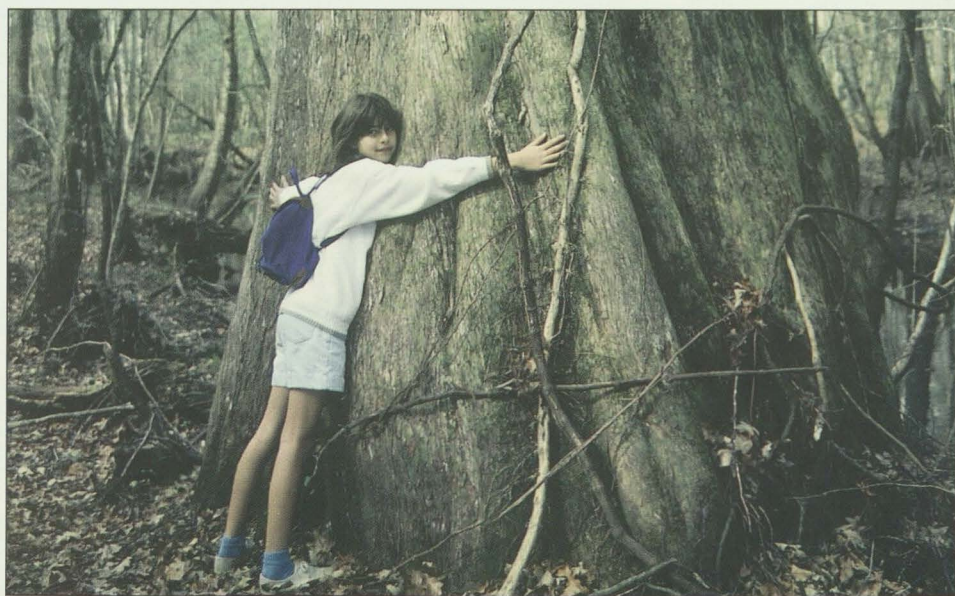
At one time Bradwell Bay was part of

an ancient shoreline, perhaps a saltwater bay. Beneath the dense vegetation are layer upon layer of sand, clay and limestone that were deposited or created by ancient seas. In the northeastern part of the area is a sand ridge supporting turkey oak, sand live oak, wax myrtle, Chipman oak and longleaf pine. According to noted plant ecologist Andre Clewell, this vegetative mix is normally found on the coast (over fifteen miles away), the sand ridge being a possible relic of a Pleistocene seashore.

While tramping through the primeval swamp, one doesn't generally think of ancient seas or planetary evolution. There are too many thoughts of how best to navigate the terrain. Too many thoughts of bear. The swamp itself seems like a metaphor for struggle. Countless vines weave death grips around trees. Plants and saplings fight to close openings made by fallen giants. Shadows seem to devour sunlight. Everything in Bradwell Bay looks to be choking, swallowing or crowding something else. Even the human's path through the swamp is made at the expense of something else – carved with a machete. Man truly is an intruder.

In hiking through the swamp that day, with darkness closing in and knowing that I had two or more miles to go before reaching a road, I focused on getting out. Just as I left the big tree area, I saw bear tracks again. This time the bear had only followed the trail briefly before veering north, towards the heart of the bay.

Female black bears require 10-15 square miles of wild territory; males require four to five times that amount. Because they are territorial and because suitable habitat is dwindling, only 1,000-1,500 black bears remain in Florida. Even this number is threatened. In 1996, 59 Florida black bears were killed by vehicles alone. Big roadless areas like Bradwell Bay are crucial to their survival. And if a bear wants to use an orange-blazed hiking trail for a territorial boundary, I won't argue with him. You kind of expect that in a place like Bradwell Bay. 🐾



A state record pond cypress was found in Bradwell Bay in 1983.

Doug Alderson has been exploring swamps and wild places for over twenty years. He is a free lance writer, photographer and environmental educator in the Tallahassee area.

WANT TO HIKE BRADWELL BAY?

To plan a Bradwell Bay hike, one needs a Florida Trail guide and an Apalachicola National Forest map (see below), old tennis shoes or rubber boots, bug repellent (depending on the season), a first-aid kit, and plenty of water and snacks. Long pants and possibly chaps are recommended since the trail can be brushy. Be aware of water levels – if there's water in the roadside ditches or if the area rivers are up, then there's going to be plenty of water in the bay. The more water, the slower the hiking. Plan accordingly. A walking stick can be helpful to poke into pools and underlying muck to check the depth before wading through. Hiking alone, at least initially, is not advisable.

For more information, contact:

The Florida Trail Association
P.O. Box 13708
Gainesville, FL 32604
(904) 378-8823

U.S Forest Service, Wakulla Office
Route 6, Box 7800
Crawfordville, FL 32327
(850) 926-3561



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CONSERVATION UPDATE

Compiled by Magazine Staff

The Business of Watching Wildlife

It's not too late to register for the third annual Watchable Wildlife Conference, May 20-21 in Cocoa Beach. Alison Deming, author of *Temporary Homelands: Essays on Nature, Spirit and Place*, will be the keynote speaker. The two-day conference will discuss sustainable, nature-based tourism. On May 19 pre-conference workshops include teaching birding, effective self-marketing, nature writing, designing an ecotour site and organizing nature-based festivals.

For a full conference brochure and registration information, call Nancy Jordan at (850) 922-0664.

Associate Editor Appointed



Dick Sublet

James Call is the new associate editor of *Florida Wildlife*. Call, a native Pennsylvanian, earned an MA degree from The Ohio State University while completing a Kiplinger Fellowship in journalism. A long time Tallahassee-based journalist, Call is married

and has two sons. He replaces associate editor Janisse Ray who is pursuing a full-time writing career.

Fish Management Rule Changed in January

The March 1998 issue of *Florida Wildlife* incorrectly stated the minimum size of redear sunfish you can keep at Merritt's Mill Pond FMA in Jackson County. The new rule states that you may keep five over 14 inches. We regret the error.

Free Fishing Weekend

To commemorate National Fishing Day, the GFC has declared the first weekend in June a Free Fishing Weekend. On June 6 and 7 anyone, nonresidents included, can sportfish in any public freshwater lake or river without a Florida fishing license. All other fishing laws and regulations remain in effect.

Activities around the state include a Family Fun Fishing Day on Saturday from 8:30 a.m. until noon at Tropical Park in Miami. The address is 7900 SW 40th Street. There is no pre-registration. For more information, call (561) 791-4730.

Free Kids' Fishing Derbies are planned for Saturday, June 6, from 9 a.m. to noon at three locations:

- Freedom Lake Park in Pinellas Park, call (941) 648-3202
- Hanna Park in Jacksonville, call (904) 448-4394

- Lake Lorna Doone, Orlando, near the Citrus Bowl, call (407) 317-7329

Deadliest Year on Record for Bears

In 1997, automobile collisions killed 71 black bears on Florida roads. The record number of deaths represents an 18 percent increase from the previous year.

Since 1976, 600 bears have died in roadway accidents. Cars and trucks pose a great threat to the bear's survival because the Florida highway system fragments the few remaining bear habitats.

To minimize road dangers the state has constructed wildlife underpasses throughout Florida. One on state Road 46, a site of multiple bear deaths in the past, was used by 21 black bears during a one-year period.

Festival Offers Chance to See Rookery

Wading birds are the focus of the third annual Moss Park Wading Bird Festival, Saturday, May 9, from 8 a.m. until 2 p.m. near Orlando. Free, guided pontoon boat tours of the Lake Mary Jane Rookery, one of Florida's more important bird colonies, will be provided. Spotting scopes will be set up along the beach, as well.

For more information and directions to the park, call the GFC at (352) 732-1225 or Moss Park at (407) 273-2327.

Remembering Woody Darden

Florida Wildlife recently lost a friend, Woodrow "Woody" J. Darden died of a brain aneurysm March 20. The 50 year-old Darden worked for the Game and Fresh Water Fish Commission for 17 years, beginning his career as assistant director of the Office of Informational Services. He became director of that office in 1993, before moving to West Palm Beach, where he served as Regional Director for the Everglades Region for three years. During his tenure he also assisted in liaison efforts with the legislature for the Commission.

Woody was a skilled bass angler, and his family suggests friends can honor his memory by contributing to the North American Lake Management Society, P.O. Box 54433 Madison, WI 53705, an organization dedicated to preserving freshwater lakes.

Wildlife Photo Contest Deadline

The 1998 *Florida Wildlife* photo contest deadline is June 15. For contest rules and entry form contact Florida Wildlife Photo Contest, 620 S. Meridian Street, Tallahassee, FL 32399-1600; send a FAX to (850) 488-1961; call (850) 488-5563 or check our publication's Internet site at www.state.fl.us/gfc/ .

